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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,654	08/25/2005	Javad Khajepour	PAT 3281W-2	8598

26123 7590 12/15/2006

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EXAMINER

CHOE, HENRY

ART UNIT PAPER NUMBER

2817

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/522,654

Applicant(s)

KHAJEHPOUR, JAVAD

Examiner

Henry K. Choe

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 11-16 is/are rejected.
- 7) ☒ Claim(s) 2,9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/20/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☒ Notice of Informal Patent Application
- 6) ☒ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-8, 11 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Zocher (Figs. 4 and 5).

Regarding claims 1 and 15, Zocher (Figs. 4 and 5) discloses an amplifier circuit comprising a positive signal amplifier (508) having a first input (416) for receiving a positive RF signal (VIN+) and a first output (420) for providing an amplified positive RF signal (VOUT+), a negative signal amplifier (510) having a second input (418) for receiving a negative RF signal (VIN-) and a second output (422) for providing an amplified negative RF signal (VOUT-), a tunable differential filter (424, 402, 426, 404, 410, 209) having a tuning control input (209), a third input (base terminal of transistor 424) for the first output (420) and a fourth input (base terminal of transistor 426) for the second output (422), and the frequency (402 or 404) response of the tunable differential filter (424, 402, 426, 404, 410, 209) varying (When the transistor 424 is on or off; When the transistor 426 is on or off ) with a control signal (FILTER CONTROL SIGNAL) input to the tuning control input (209) and whereby signal of undesired frequency may be filtered from the first output (420) and the second output (422).

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Regarding claim 3, the tunable differential filter (424, 402, 426, 404, 410, 209) comprises a capacitor filter (402).

Regarding claim 4, the positive (508) and negative (510) signal amplifiers includes source degeneracy [(530); It should be noted that the transistor 530 can be read as the claimed source degeneracy since the transistor 530 is a current source].

Regarding claim 5, Zocher (Figs. 4 and 5) further comprising a sleep circuit [(426); It should be noted that the transistor 426 can be read as the claimed sleep circuit since it (426) is connected to the capacitor 404].

Regarding claim 6, Zocher (Figs. 4 and 5) further comprising RF blocking transistors [(528, 524); It should be noted that the transistors 528 and 524 can be read as the claimed blocking transistors since they provide the bias voltage to current source 530].

Regarding claims 7 and 11, the positive (508) and negative (510) signal amplifiers comprise single amplification stage comprising a single transistor.

Regarding claim 8, the tunable differential filter (424, 402, 426, 404, 410, 209) comprises two capacitor filters (402, 404) and switched in (transistor 424 is on; transistor 426 is on) and out (transistor 424 is off; transistor 426 is off) of the circuit using transistors (424, 426).

Regarding claims 13 and 14, the limitations recited in claims are intended use of the invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zocher (Figs. 4 and 5).

Regarding claim 12, Zocher (Figs. 4 and 5) discloses all the limitations in claim 12 except for that the transistors being FETs. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted well known art-recognized equivalent transistors such as FETs in place of the bipolar transistors in the circuit of the Zocher (Figs. 4 and 5) because such a modification would have been considered a mere substitution of art-recognized equivalent transistors.

Regarding claim 16, Zocher (Figs. 4 and 5) discloses all the limitations in claim 16 except for that the amplifier is fully integrated. It is well known to fully integrate the semiconductor devices in order to form of small sized Integrated Circuit (IC). Therefore, it would have been obvious to have fully integrated the circuitry of Zocher (Figs. 4 and 5) because such a modification would have advantageously produced a small-sized integrated circuit.

***Allowable Subject Matter***

Claims 2, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


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**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (6,771,124; 6,600,373) are the differential amplifiers with the filters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.

  
**HENRY CHOE**  
**PRIMARY EXAMINER**

#1201



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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO./TITLE
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10/522,654

Application Number:

Attachment to Paper Number:

### NOTICE OF INFORMAL APPLICATION

This application is considered to be informal since it does not comply with the regulations for the reason(s) indicated below. The period within which to correct the informalities noted below and avoid abandonment is set in the accompanying Office action.

**A. A new oath or declaration, identifying this application by the application number is required. The oath or declaration does not comply with 37 CFR 1.63 in that it:**

- ☒ 1. does not identify the residence (e.g., city and either state or foreign country) of each inventor.
- ☐ 2. does not identify each inventor by full name, including the family name and at least one given name without abbreviation.
- ☐ 3. does not identify the complete post office address of each inventor.
- ☐ 4. does not identify the citizenship of each inventor.
- ☐ 5. does not state whether the inventor is a sole or joint inventor.
- ☐ 6. does not state that the person making the oath or declaration:
  - ☐ has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.
  - ☐ believes the named inventor or inventors to be the original and the first inventor or inventors of the subject matter which is claimed and for which a patent is sought.
  - ☐ acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.
- ☐ 7. does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month, and year of its filing.
- ☐ 8. does not state that the person making the oath or declaration acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application which discloses and claims subject matter in addition to that disclosed in the prior application (37 CFR 1.63(e)).
- ☐ 9. contains non-initialed alterations (37 CFR 1.52(c)).

**B. Applicant is required to provide:**

- ☐ 1. Proof of authority of the legal representative under 37 CFR 1.44.
- ☐ 2. An abstract in compliance with 37 CFR 1.72(b).

**C. ☐ OTHER:**

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